

HM&E Standardization ExComm

Working Group One - New Construction

12 January 2007

- Establish standardization mechanisms and incentives to be used during acquisition phase
- Promote HM&E standardization for the acquisition of new systems during new construction
- Apply HM&E policy, processes, and approaches in new construction contracts



HM&E Standardization - WG #1 Members - New Construction



Organization / Code	PHONE
PEO CARRIERS	202-781-0558
PMS 500F	202-781-2569
NAVSEA 02	202-781-2908
PEO SUBS	202-781-1475
SEA 05D	202-781-1113
DPM VA CLASS SUBS	202-781-4053
PMS 377B	202-781-0745
PMS 317 B	202-781-2907
PMS 325 B	202-781-1941

30 & 120 Day Update

Completed items last 30 days

- **Hosted SHAPM / NAVICP / Shipbuilder (NGSS, BIW, NGNN) Standardization Road Ahead Meeting.**
- **Obtained list of DDG 1000 material from parts catalogue.**
- **Drafted award fee event language for insertion into DDG 1000 contract.**
- **Confirmed and identified the existence of two standardization NAVSEA C clauses in the SEA 02 database.**

Next 120 days

- **Analyze DDG 1000 Class Common Equipment list and report associated standardization metrics.**
- **Extract detail design material lists from CPC for DDG 1000. Analyze this list for metrics development and to optimize NAVICP commodity contracts.**
- **Identify design specs that drive up equipment cost.**
- **Conduct follow up reviews with NAVICP, Shipyards, and new construction PMs to investigate use of supply system for commodity buys.**
- **Include award fee event in DDG 1000 detailed design contract.**
- **Investigate LCS 3 and 4 standardization opportunities.**
- **Update NAVSEA C clauses with references to HEDRS and Common Parts Catalogue.**

HM&E Standardization - WG #1 Members - Action Plan

What	Who	When	Status
Pre-Meeting to educate BIW and NGSS on HM&E Standardization ExComm and required support	PMS 500F, BIW, NGSS	18 Oct, 2006	Meeting held w/ Kirk Lussier (BIW Director, Design & Build) & Ron Mahaffey (NGSS Director, LCM).
Meeting to investigate Shipyard utilization of supply system for commodity purchases	NAVICP, PMS 500F, PEO Carriers, NGSS, BIW	8 Nov, 2006	Meeting held; participating activities included NAVICP, NAVSUP, NSLC, DLA, OPNAV N86, PMS500, PMS378, NAVSEA 04L, NSWC-CD, NGSS, BIW, NGNN.
Obtain lessons learned from Seawolf and Virginia class submarines	All Working Group 1	15 Nov, 2006	Received initial input 18 Oct.
Formalize NAVSEA C clause for standardization	SEA 02	15 Dec, 2006	SEA 02 confirmed clause C-2-0052 and C-2-053 are active clauses in SEA 02 database on 6 Dec. Contacted Teri Ryan to initiate updates to clauses.
Determine metrics and goals for DDG 1000 and CVN-21	PMS 500F, PEO CARRIERS, SEA 04L	12 Jan, 2007	In work; initial DDG 1000 metrics under internal review.
Modify DDG 1000 CLIN 03 (detail design and construction) to include NAVSEA C clause	PMS 500	26 Jan, 2007	Pending update of C clause.
Include an award fee event on DDG 1000 contract for standardization	PMS 500	16 March, 2007	Award Fee language has been drafted. Next mod to be executed late Jan '07.

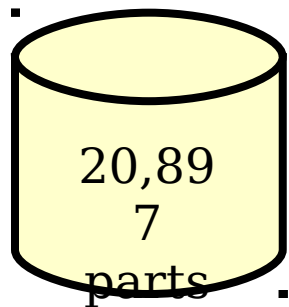
- For the DDG 1000 Program, Standardization has been contractually mandated within the Design, Build and Process Specification (DBPS 080 – Support System)

080m. Standardization. - The Contractor shall implement a standardization process, reducing range and increasing depth of like equipments, to enhance supportability and minimize life cycle costs through the selection of equipment and components which are, to the maximum extent possible, (1) common within the ship, (2) common for application within the DD(X) Class and (3) common with equipment/components currently installed in U.S. Navy ships. The Contractor shall utilize both Industry (e.g., the Common Parts Catalog) and Government (e.g., the Hull, Mechanical and Electrical Data Research System (HEDRS)) tools in implementing the standardization program across both shipbuilders.

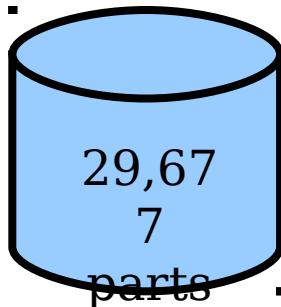
- The requirement to have standardization for DDG 1000 has been invoked since the initial stages of the program
- Language is common with spec language on CVN-21 contract

CPC supports a Parts Standardization Program

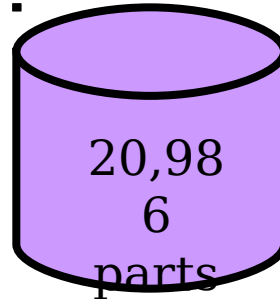
LHD



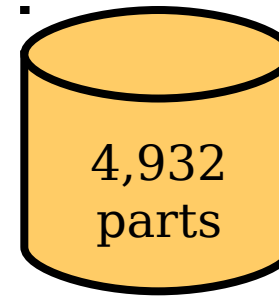
DDG



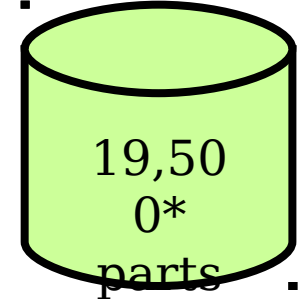
LPD



DW



DDG1000



* Projected - The DDG 1000 CPC is approximately 70% populated at this time.

- The CVN 21 approach to standardization is based on fostering intra-Navy and intra-ship commonality of systems, equipment, and components
- The CVN 21 Standardization Program requirements invoked during concept development and design phase will be continued during construction in accordance with the CVN 78 Specification, Section 070-b:

... The Contractor shall procure material and equipment in a manner which will minimize onboard repair parts (reduce/optimize number of different varieties of components and equipment) consistent with the technical performance requirements of this specification and the standardization article of the Special Provisions of the Contract which shall take precedence. **To achieve these requirements, the Lead Design Yard (LDY) shall implement a formal standardization program. The results of the standardization program shall be the establishment of a catalog of standard parts that is to be used in new design applications whenever possible.** The goal of the standard parts catalog shall be to reduce the number of unique part numbers used in new design applications. The program shall ensure that only parts from the standard parts catalog are used in new design applications and that additions to the standard parts catalog are formally controlled by the standardization program ...

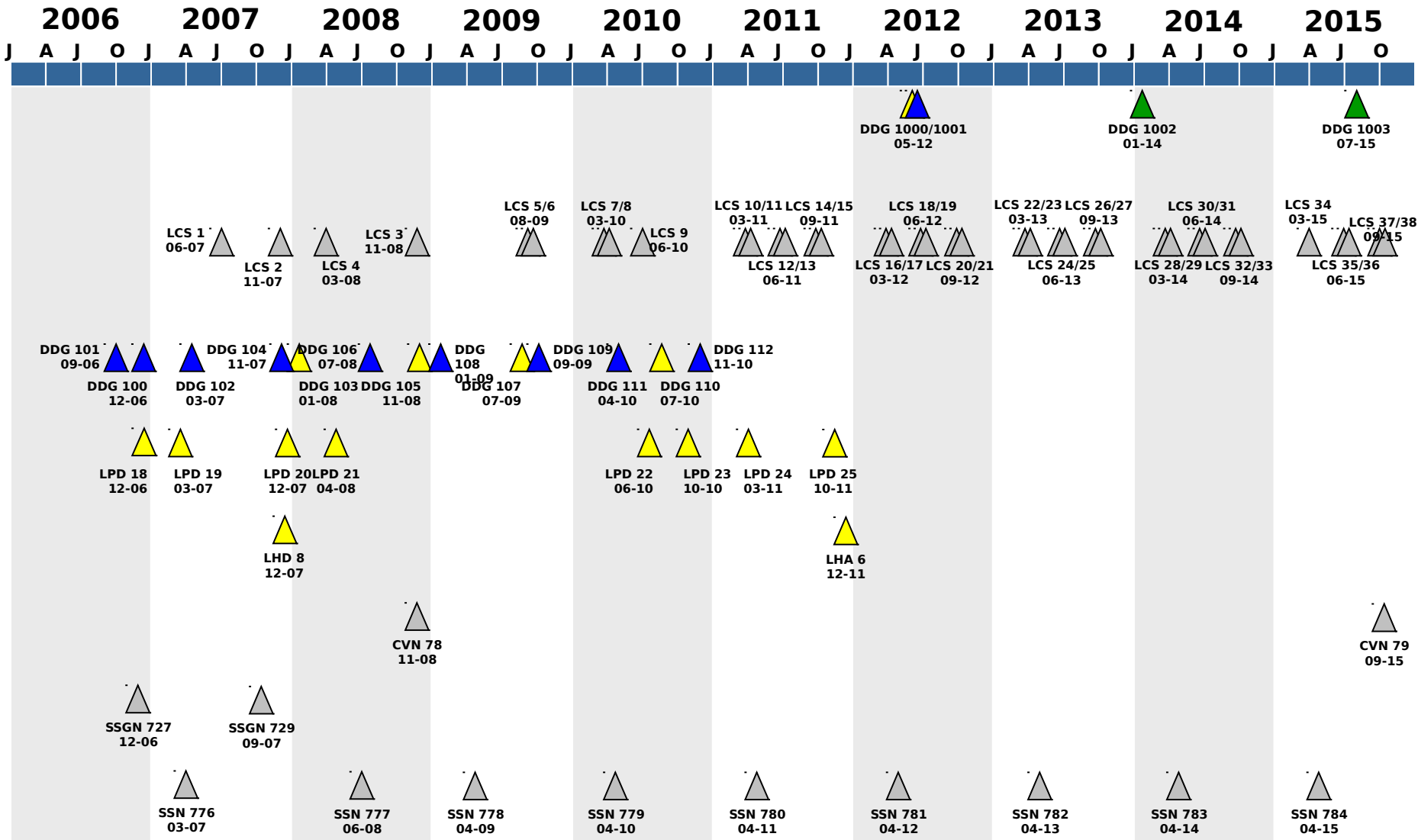
- **The CVN 21 Standardization Program will:**
 - Achieve optimal standardization of systems/equipment/ components by maximizing the use of items already installed in ships of the fleet (intra-navy standardization)
Metric: Number of Standard APLs vs Unique APLs
 - Attain the optimal level of commonality of systems/equipment/ components by maximizing the use of items already installed in operational carriers (intra ship/class commonality)
Metric: Range of CVN 78 OBRPs vs Range of CVN 77/CVN 68 Class OBRPs
 - Review/approve standardization decisions documented in a Decision Memorandum (DM) as part of the Systems Engineering Process
*Metric: (1) DMs in regard to standard vs nonstandard
(2) Number of repair parts and commodities reviewed.*
- **By-products of standardization and commonality include: reduction of unique technical data, increased transferability of operational and maintenance skills and reduced range of OBRP**

- New construction PMs are including standardization requirements in contracts
- Shipbuilders are improving established standardization processes
- DDG 1000 offers opportunity to demonstrate improved standardization process, with CVN-21 to follow
- Pursuing opportunities to leverage Navy commodity contracts and best value tools to improve new construction standardization



Backup

Ship Delivery Schedule through 2015



KEY



NGSS Delivery



BIW Delivery



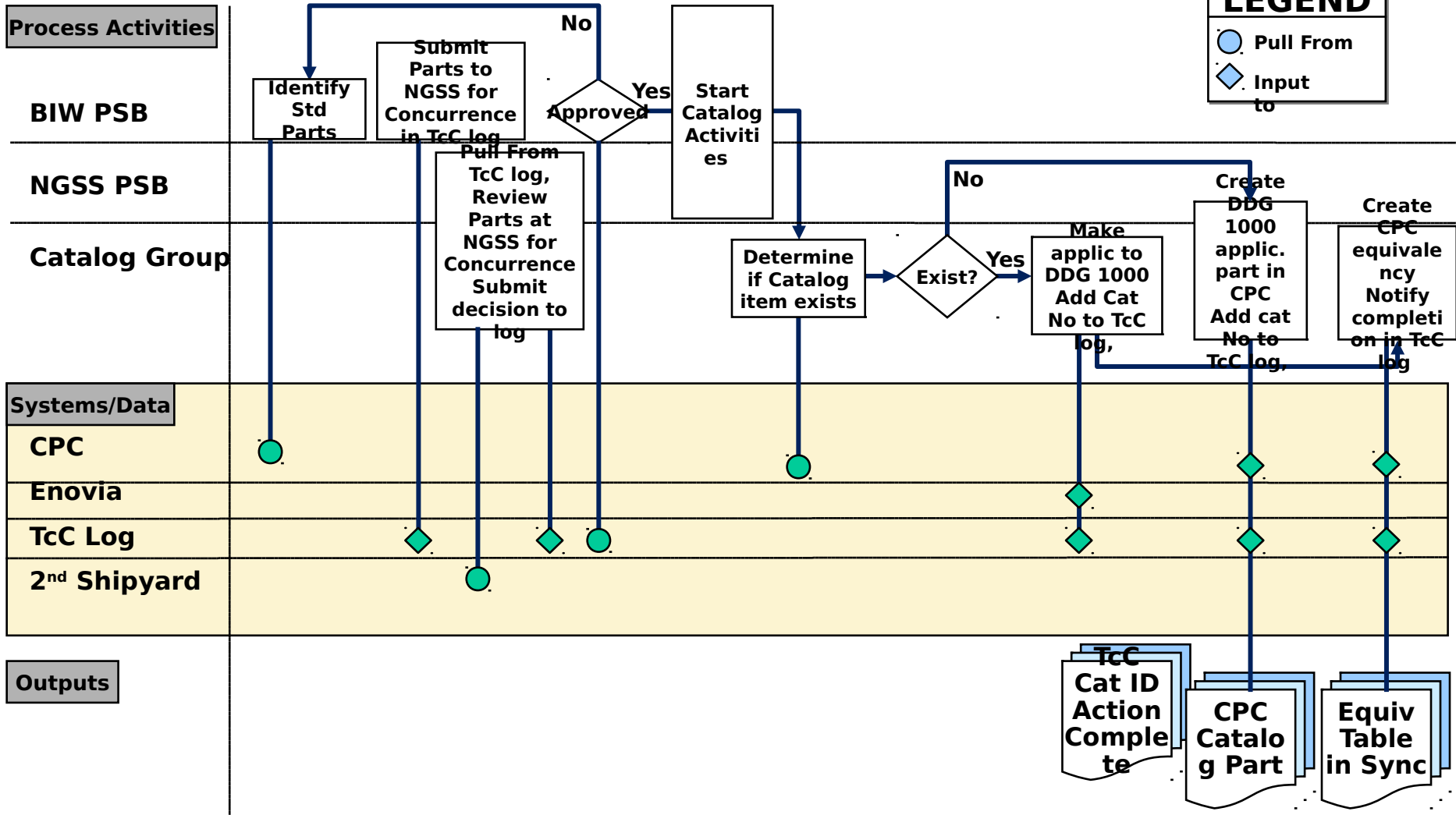
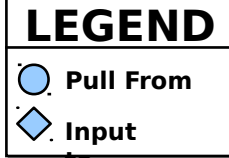
Shipbuilder TBD (NGSS/BIW)

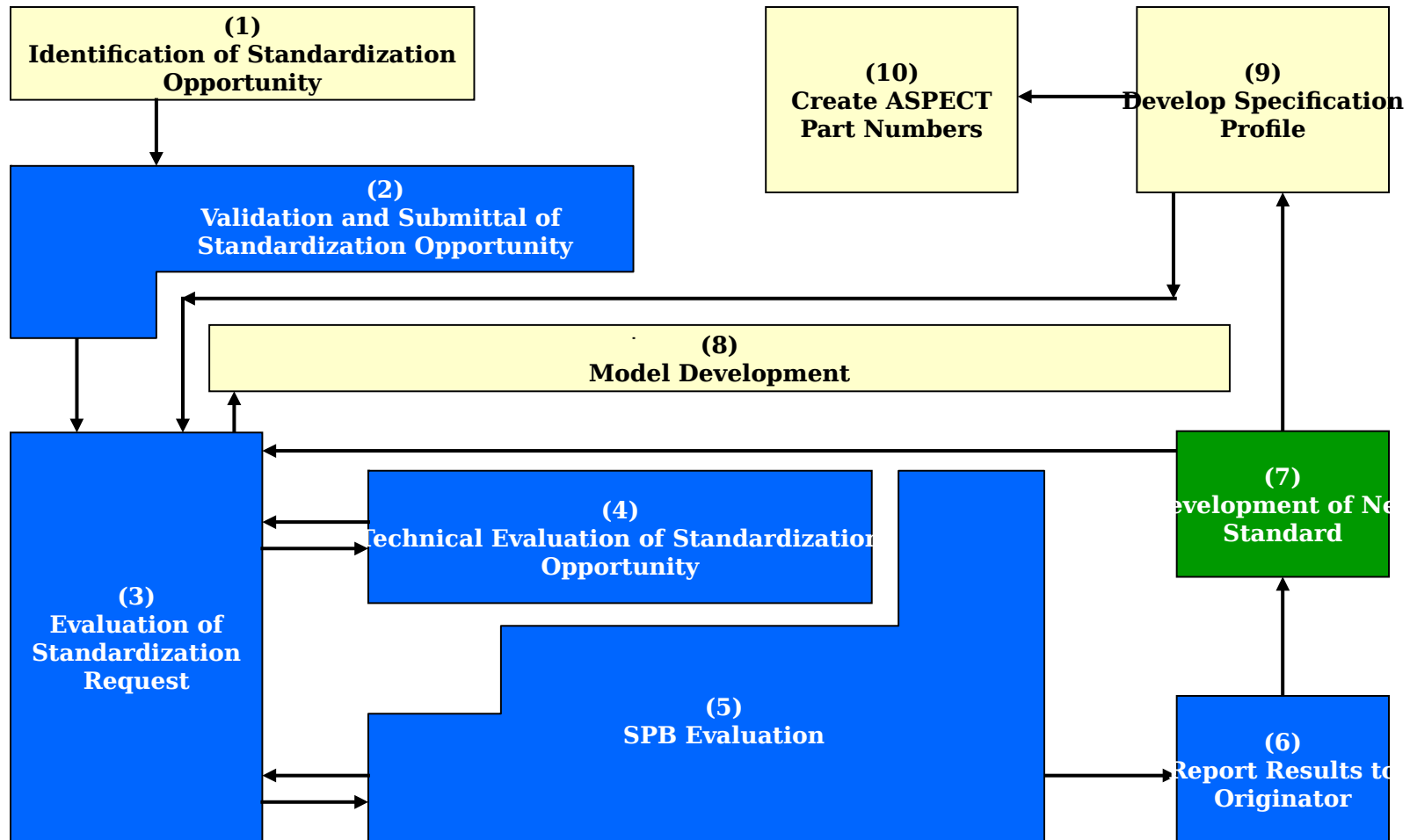


Other

- HQ C-2-0052 STANDARDIZATION (NAVSEA) (SEP 1990)
 - Subject to meeting the requirements of the specifications, the Contractor shall utilize equipments and components identical to those of the ____ Class Ships. Where equipments or components are not available, the Contractor shall select hull, mechanical, and electrical components in the following order:
 - (a) Equipment which meets the requirements of the specifications and is identical to equipments and components of the ____ Class Ships.
 - (b) Equipment which meets the requirements of the specifications and which appears in NAVSEA Standard Components List for Hull, Mechanical and Electrical Equipment, NAVSEA S 0300 A PLL OO O (standard equipment).

DDG 1000 Parts Standardization Process



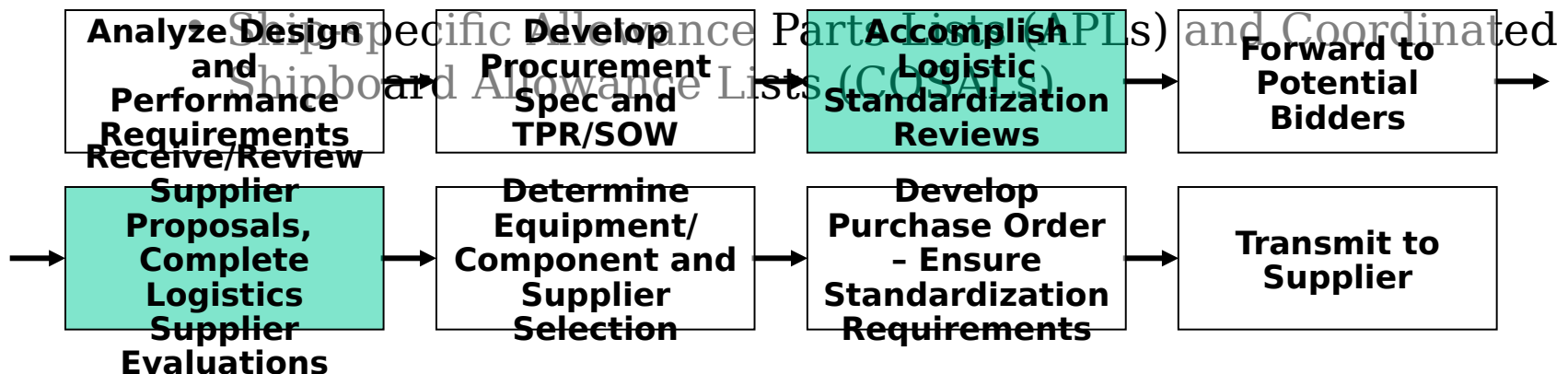


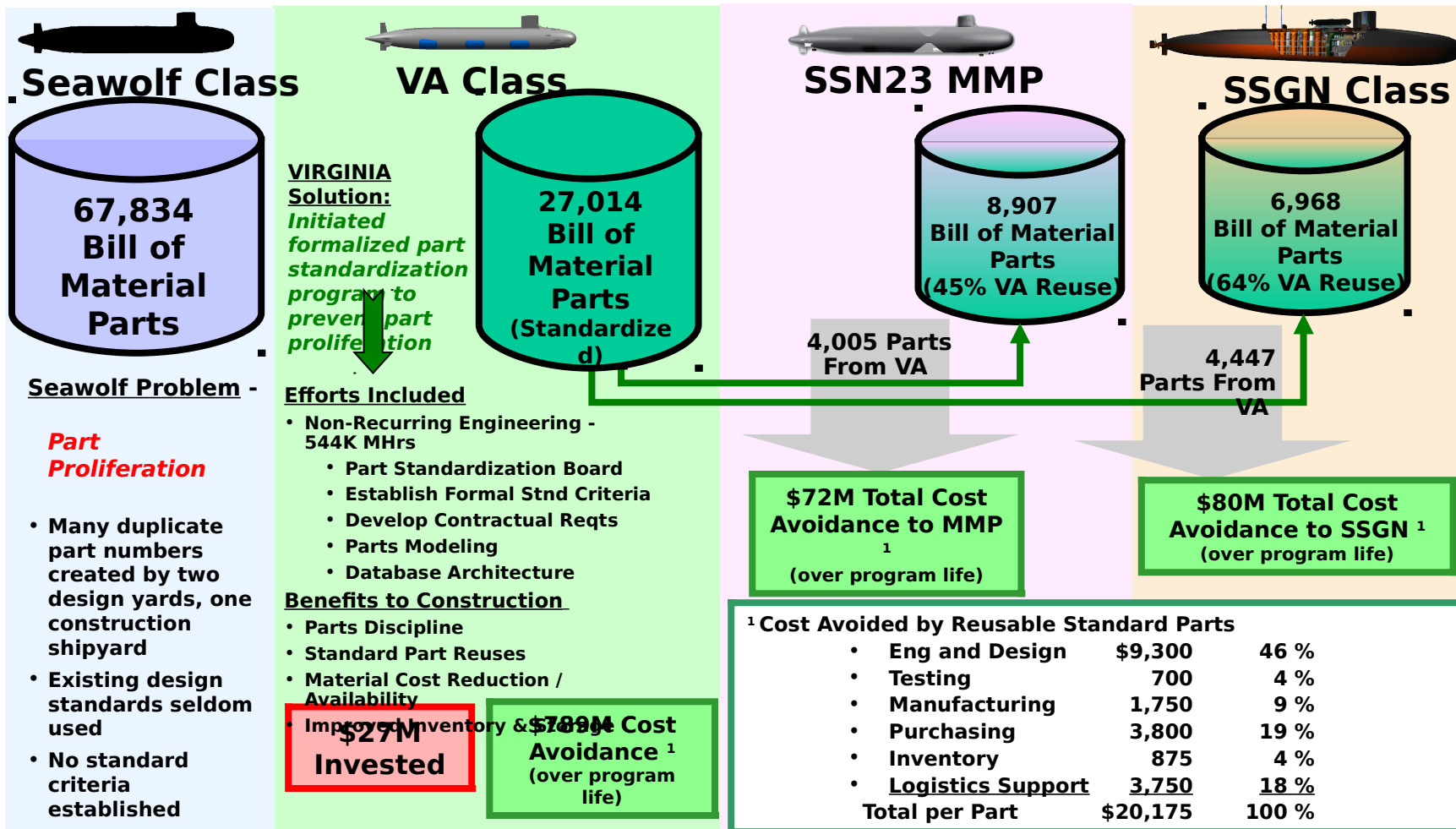
Criteria:

1) Technical performance to specification	5) Supply chain availability
2) Part standardization	6) Weight
3) Environmental	7) Life cycle
4) Cost	

- NGSS

- For the LHD 8 Program, a standardization program was established for equipment designers which requires them to perform a standardization review prior to vendor selection
- Requires a review of
 - Hull, Mechanical and Electrical Equipment Data Research System (HEDRS)
 - Supportable Equipment Lists (SELs)





NSRP's \$3M CPC investment deployed the tools in other yards and Navy programs - and to NAVICP if desired

Note: Cost Avoidance of \$20K per part based on DLA Parts Standardization and Management Committee study, "Reduced Program Cost Thru Parts Mgmt," 2002